



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,602	03/26/2001	Mark John Anderson	ROC920000326US1	7819

7590 10/27/2003

Gero G. McClellan  
Thomason, Moser & Patterson, L.L.P.  
3040 Post Oak Boulevard, Suite 1500  
Houston, TX 77056-6582

EXAMINER
----------

PARDO, THUY N

ART UNIT	PAPER NUMBER
----------	--------------

2175

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/817,602

Applicant(s)

ANDERSON ET AL.

Examiner

Thuy Pardo

Art Unit

2175

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 8-22 and 24-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-22, 24-38, 46, 47, 50 and 51 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10, 39-45, 48, and 49 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Applicant's Amendment filed on October 08, 1999 in response to Examiner's Office Action has been reviewed. Claims 7 and 23 have been amended and claims 50 and 51 have been added.

2. Claims 1-6, 8-22, and 24-51 are presented for examination.

### *Drawings*

3. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on August 11, 2003 have been accepted, and it has been placed of record in the application file.

### *Claim Rejections - 35 USC § 102(b)*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6, 8-10, 39-45, and 46-49 are rejected under 35 U.S.C. § 102(b) as being anticipated by **Bakuya et al.** (Hereinafter "Bakuya") US Patent No. 5,680,614.

As to claim 1, Bakuya teaches the invention substantially as claimed, comprising:  
a status value indicative of whether the trigger definition is operative or inoperative [the operation mode specified in the trigger definition are the same and does not execute any trigger execution when they are not the same, ab; “trigger after update exist”→“No”→“End” see fig. 3A];

a type value indicative of whether the trigger definition is self-referencing [col. 8, lines 66 to col. 9, lines 7; 316-318 of fig. 3A]; and

at least one dependent object having a dependency relationship with the trigger definition [a triggered operation based on the relations among the system tables, ab; [col. 8, lines 66 to col. 9, lines 7].

As to claim 2, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that the object is a table [objects “section” or “employee” are tables, see fig. 7B, 7C].

As to claim 3, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that the at least one dependent object is one of a table, a physical file, a collection, a schema, a library, a view, a logical file, an index, a user-defined function, a user-defined type, an alias and a procedure [a collection of records, fig. 7B, 7C; col. 10, lines 8-18].

As to claim 4, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that the trigger definition information further comprises a trigger definition name and an SQL trigger statement area [fig. 10-11].

As to claim 5, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that status value is changed from an operative setting to an inoperative setting if the object is modified and if the type value indicates that the trigger definition is self-referencing [col. 10, lines 29-57].

As to claim 6, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that status value is changed from an operative setting to an inoperative setting if the at least one dependent object is modified [col. 9, lines 33-40].

As to claim 8, Bakuya teaches the invention substantially as claimed. Bakuya further teaches a CREATE TRIGGER statement containing the at least one dependent object; and a dependent object area for the at least one dependent object [fig. 5A-5C].

As to claim 9, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that the dependent object area is a list containing the at least one dependent object [fig. 7A].

As to claim 10, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that the dependent object area specifies a location of the at least one dependent object [fig. 7A].

As to claim 39, Bakuya teaches the invention substantially as claimed, comprising a signal bearing medium containing a database management program [fig. 1] which, when executed by at least one processor, performs a method of maintaining integrity in a database [12 of fig. 1] comprising a plurality of triggers defined on at least one of a plurality of tables [col. 10, lines 29-34; fig. 7], the method comprising: upon receiving a database command to affect a database object [requested manipulation, col. 5, lines 35-40], determining whether at least one dependent entity is dependent on the database object; and if the least one dependent entity is dependent on the database object and if the database command is a first command type [fig. 5A-5C], leaving the database object and the at least one dependent entity unaffected by the database command [col. 10, lines 22-28].

As to claim 40, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that determining whether the object has a dependency relationship comprises querying a system catalog with at least one of a name for the object “section”, “employee”, fig. 8B] and a library for the object [libraries “tables”, “view-table-usage”, fig. 8B].

As to claim 41, Bakuya teaches the invention substantially as claimed. Bakuya further teaches if the at least one dependent entity is not dependent on the database object and if the database command is the first command type, affecting the database object according to the database command [fig. 9].

As to claim 42, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that the at least one dependent entity is a trigger [col. 10, lines 29-34].

As to claim 43, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that the at least one dependent entity comprises at least one of a trigger, a view and a constraint [see fig. 8B].

As to claim 44, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that the database command is one of a system command and an SQL command [see fig. 8A].

As to claim 45, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that the first command type is a RESTRICT command [col. 9, lines 18-32; col. 10, lines 22-27].

As to claim 48, all limitations of this claim have been addressed in the analysis above, and this claim is rejected on that basis.

As to claim 49, Bakuya teaches the invention substantially as claimed. Bakuya further teaches that the third command type is a DEFAULT CASCADE command [col. 9, lines 50-56].

***Allowable Subject Matter***

6. Claims 11-22, 24-38, 46, 47, 50, and 51 are allowed over the prior art of record.

7. The following is an Examiner's Statement of Reasons for Allowance:

The prior art of record fails to teach or suggest individually or in combination the feature of determining whether a trigger defined on the object is self-referencing; and if the trigger is self-referencing, making the trigger inoperative as set forth in independent claims 11, 17, 25, and 31, a CREATE TRIGGER statement containing the at least one dependent object; and a dependent object area specifying a location of the at least one dependent object according to a dependent object name offset from a beginning of the CREATE TRIGGER statement, a dependent object name length, a dependent object library offset from the beginning of the CREATE TRIGGER statement and a dependent object library length, as specified in the independent claim 50, and determining the table on which the at least one trigger is defined comprises querying a first system catalog with a trigger name and a trigger library for the at least one trigger and wherein determining whether the object has a dependency relationship comprises



querying a second system catalog with at least one of an object name and an object library for the object as specified in the independent claim 51.

Dependent claims 12-16, 18-22, 24, 26-30, 32-38, 46 and 47 being further limiting to the independent claims 11, 17, 25, and 31 respectively, definite and enable by the Specification are also allowed.

### ***Response to Arguments***

8. Applicant argues that Bakuya does not teach a self-referencing trigger.

Examiner respectfully disagrees. Examiner believes that this feature was taught by Bakuya. A self-referencing trigger is a trigger which is created on the table and also referred to in the trigger body. Bakuya teaches that when the trigger definition for deletion of a record from the “Employee” table is inserted, it causes an operation to change the values at the “Superior” column to NULL for all records having at the “Superior” column [see col. 8, lines 66 to col. 9, lines 5]. Furthermore, Examiner recognizes that this feature is not addressed in the independent claim 39.

Applicant argues that Bakuya does not teach determining whether the object has a dependency relationship with at least one trigger of the plurality of triggers.

Examiner respectfully disagrees. Examiner believes that this feature was also taught by Bakuya. Bakuya teaches that when a “Employee” table trigger is created, three triggers are also

generated: "Employee FK INS 001", "Employee FK UPD 001", and "Employee FK DEL 001"  
[see fig. 7; col. 10, lines 29-34, 45-50].

9. Applicant's arguments filed August 11, 2003 have been fully considered but they are not persuasive.

***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

11. Further references of interest are cited on Form PTO-892 which is an attachment to this office action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy Pardo, whose telephone number is (703) 305-1091. The examiner can normally be reached Monday through Thursday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached at (703) 305-3830.

The fax phone number for the organization where this application or proceeding is assigned are as follows:

703-872-9306 (Official Communication)

and/or:

(703) 746-5616 (*Use this Fax#, only after approval by Examiner, for "INFORMAL" or "Draft" communication. Examiner may request that a formal/amendment be faxed directly to them on occasions*).

Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

13. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 308-9051, (for formal communications intended for entry)

**Or:**

(703) 308-5359, (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington.

VA., Sixth Floor (Receptionist).

A handwritten signature in black ink, appearing to be 'Thuy Pardo', with a long horizontal line extending to the right.

Thuy Pardo  
October 16, 2003